Appl. No. 10/,677, 808
Amdt. Dated February 18, 2005
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<u>Listing of Claims</u>:

1.   (original) A method for testing battery connectivity in a battery-backed up system, the method comprising:

    inducing a step increase in a battery bus voltage; and

    monitoring a magnitude of a corresponding current pulse of a battery charge due to the step increase in the battery bus voltage,

    wherein the magnitude of the current pulse provides an indicator of battery connectivity.

2.   (original) The method of claim 1 further comprising issuing an indicator when the magnitude of the current pulse drops below a pre-determined value.

3.   (currently amended) The method of claim 1, wherein the step increase is less than about 10% of a float level of the battery bus voltage [[(52)]].

4.   (original) The method of claim 1, wherein the step increase is applied for less than about a two second duration.

5.   (currently amended) The method of claim 1 further comprising forecasting a battery health by periodically testing battery connectivity and observing a trend of the current pulse [[(64)]] over a period of time, wherein a change in magnitude of the current pulse over the period of time provides an indicator for the battery health.

6.   (original) A method for forecasting a battery health in a battery-backed up system, the method comprising:

    periodically conducting a connectivity test;

    observing a magnitude of a current pulse obtained by the connectivity test over a period of time; and

    using a trend in change in magnitude of the current pulse over the period of time to indicate the battery health,

wherein the current pulse is a response to a step increase in a battery bus voltage.

7.   (original) The method of claim 6, wherein the connectivity test comprises:

inducing the step increase in the battery bus voltage; and

monitoring the magnitude of a corresponding current pulse of a battery charge due to the step increase in the battery bus voltage,

wherein the magnitude of the current pulse provides an indicator of battery connectivity.

8.   (original) A method of claim 6 further comprising issuing an indicator when a decline in the trend of the change in magnitude of the current pulse reaches a predetermined value.

9.   (original) A battery-backed up system comprising:

at least one battery to supply power to the system for maintaining a steady output;

at least one converter for charging the battery; and

a controller for detecting the battery connectivity,

wherein the controller is configured for providing a step increase in a battery bus voltage and monitoring a magnitude of a corresponding current pulse of a battery charge.

10.   (original) The system of claim 9 further comprising a current sensor to detect the current pulse.

11.   (original) The system of claim 9, wherein the magnitude of the current pulse is an indicator of battery connectivity.

12.   (original) The system of claim 9 further comprising a plurality of batteries connected in series.

13.   (original) The system of claim 9 further comprising a plurality of converters, wherein at least one converter is coupled to an input of the system, and wherein at least one converter is coupled to an output of the system.

14.   (original) The system of claim 9, wherein the controller sends an indicator when the magnitude of the current pulse reaches a pre-determined value.

15.   (original) A computer readable medium for storing and/or transmitting instructions that, when executed by a computer, perform a method for detecting battery connectivity in a battery-backed up system, the method comprising:

inducing a step increase in a battery bus voltage; and

monitoring a magnitude of a corresponding current pulse of a battery charge due to the step increase in the battery bus voltage,

wherein the magnitude of the current pulse provides an indicator of battery connectivity.

16.   (original) The computer readable medium of claim 15, wherein the method further comprises issuing an indicator when the magnitude of the current pulse drops below a pre-determined value.

17.   (original) A computer readable medium for storing and/or transmitting instructions that, when executed by a computer, perform a method for forecasting a battery health in a battery-backed up system, the method comprising:

periodically conducting a connectivity test;

observing a magnitude of a current pulse obtained by the connectivity test over a period of time; and

using a trend in change in magnitude of the current pulse over a period of time to indicate the battery health,

wherein the current pulse is in response to a step increase in a battery bus voltage.

18.   (original) The computer readable medium of claim 17, wherein the connectivity test comprises:

inducing the step increase in a battery bus voltage; and

monitoring the magnitude of a current pulse of a battery charge due to the step increase in the battery bus voltage,

wherein the magnitude of the current pulse is an indicator of battery connectivity.

19.   (original) The computer readable medium of claim 17, wherein the method further comprises issuing an indicator when a decline in the trend in change of magnitude of the current pulse reaches a predetermined value.